

# Notice No.2

## Rules and Regulations for the Classification of Ships using Gases or other Low-flashpoint Fuels, July 2018

The status of this Rule set is amended as shown and is now to be read in conjunction with this and prior Notices. Any corrigenda included in the Notice are effective immediately.

Please note that corrigenda amends to paragraphs, Tables and Figures are not shown in their entirety.

**Issue date: November 2018**

Amendments to	Effective date	IACS/IMO implementation (if applicable)
Part A, Section 2	Corrigenda	N/A
Part A-1, Section 6	1 January 2019	1 January 2019
Part A-1, Sections 9 & 10	1 January 2019	N/A



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## Part A

### 2 General

#### 2.1 Application

**LR 2.1-06** The periodic survey regulations for natural gas fuel installations are located in the *Rules and Regulations for the Classification of Ships, Part 1, Chapter 3, Section 23* ~~Part 1, Chapter 3, Section 24~~.

**LR 2.1-08a** The following are to be submitted to achieve **GR** descriptive note with applicable associated characters:

(c) **GR(T) 'Tank installed'**

Full details of the tank design are to be submitted as required by the *LR Rules and Regulations for the Classification of Ships using Gases or other Low-flashpoint Fuels*, in addition to the tank design; the scope of appraisal for this associated character includes all valves directly connected to the tank, tank connection space and pressure relief arrangements. For tanks in under deck locations, the ventilation arrangements and FS/HS arrangements are also to be reviewed. The following information is to be submitted:

- Hazardous area plan for tank location and associated ventilation arrangements, including details of electrical equipment to be installed in the identified hazardous areas.
- ~~FMEA for tank master isolation valve.~~
- Risk assessment of the tank design to the extent required for RBD.

**LR 2.1-08b** In addition to the plans and information required by the relevant Chapters of the Rules for Ships, the following are to be submitted for **LFPF(GF, NG)** machinery notation:

(v) Schedule of testing at engine/turbine builders and commissioning prior to sea trials, to demonstrate that the low-flashpoint fuelled machinery is capable of operating as described in the design statement, ~~including any testing required to confirm the conclusions of the Failure Mode and Effects Analysis (FMEA) or alternative recognised analysis technique for system reliability~~. The test schedules are to identify all modes of operation and the sea trials are to include typical port manoeuvres under all intended engine/turbine operating modes.

# Part A-1

## Specific Requirements for Ships Using Natural Gas as Fuel

### 6 Fuel Containment System

#### 6.3 Regulations – General

6.3.10 If liquefied gas fuel storage tanks are located on open deck the ship steel shall be protected from potential leakages from tank connections and other sources of leakage by use of drip trays. The material is to have a design temperature corresponding to the temperature of the fuel carried at atmospheric pressure. The normal operation pressure of the tanks shall be taken into consideration for protecting the steel structure of the ship.

**LR 6.3-03** Where the storage tank is located below the open deck, but the tank connections are on the open deck, drip trays are to be provided to protect the deck from leakages from tank connections and other sources of leakage.

**LR 6.3-04** Where the storage tank and the tank connections are located below the deck, all tank connections are to be located in a tank connection space. Drip trays are not required in this case.

### 9 Fuel Supply to Consumers

#### 9.4 Regulations on safety functions of gas supply system

9.4.7 In cases where the master gas fuel valve is automatically shutdown, the complete gas supply branch downstream of the double block and bleed valve shall be automatically ventilated assuming reverse flow from the engine to the pipe.

**LR 9.4-01** There shall be separate vent lines from areas such as gas fuel tanks and gas consumers (engines etc.) that are independent of each other. Bleed lines shall also be independent of the vent lines. Such vent and bleed lines shall not be connected to a common header unless they are from a same area.

### 10 Power Generation Including Propulsion and Other Gas Consumers

#### 10.4 Regulations for main and auxiliary boilers

10.4.5 Gas nozzles and the burner control system shall be configured such that gas fuel can only be ignited by an established oil fuel flame, unless the boiler and combustion equipment is designed and approved by the Administration to light on gas fuel.

**LR 10.4-01** Details of the associated safeguards including processes and procedures are to be submitted where the boiler and combustion equipment is specifically designed for lighting directly on gas fuel.

*Existing paragraphs LR 10.4-01 to LR 10.4-02 have been renumbered LR 10.4-02 to LR 10.4-03.*

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